CLAIMS

1. A tumor antigen peptide that is a partial peptide derived from a cyclophilin, and that is capable of binding to an HLA antigen and being recognized by cytotoxic T lymphocytes, or a derivative thereof having the functionally equivalent properties.

2. A tumor antigen peptide that is a partial peptide derived from cyclophilin B, and that is capable of binding to an HLA antigen and being recognized by cytotoxic T lymphocytes, or a derivative thereof having the functionally equivalent properties.

3. The tumor antigen peptide of claim 1 or 2 wherein the HLA antigen is HLA-A24 or HLA-A2, or a derivative thereof having the functionally equivalent properties.

4. The tumor antigen peptide of claim 3, that is selected from sequences comprising all or part of an amino acid sequence shown in any one of SEQ ID NOs: 1-36 or SEQ ID NOs: 41-43, or a derivative thereof having the functionally equivalent properties.

5. The tumor antigen peptide of claim 4, that is selected from sequences comprising all or part of the amino acid sequence shown in SEQ ID NO: 1 or 2, or a derivative thereof having the functionally equivalent properties.

6. The tumor antigen peptide derivative of claim 4, that is selected from sequences comprising all or part of an amino acid sequence in which the amino acid residue at position 2 and/or the C-terminus in the amino acid sequence shown in any one of SEQ ID NOs: 1-36 is substituted by another amino acid residue.

7. The tumor antigen peptide derivative of claim 6, that is selected from sequences comprising all or part of an amino acid sequence in which the amino acid residue at position 2 and/or the C-terminus in the amino acid sequence shown in SEQ ID NO: 1 or 2 is substituted by another amino acid residue.

8. The tumor antigen peptide derivative of claim 6, that is selected from sequences comprising all or part of an amino acid sequence in which the amino acid residue at position 2 in the amino acid sequence shown in any one of SEQ ID NOs: 1-11 is substituted by tyrosine, phenylalanine, methionine, or tryptophan, and/or the amino acid residue at the C-terminus is substituted by phenylalanine, leucine, isoleucine, tryptophan, or methionine.

9. The tumor antigen peptide derivative of claim 6, that is selected from sequences comprising all or part of an amino acid sequence in which the amino acid residue at position 2 in the amino acid sequence shown in any one of SEQ ID NOs: 12-36 is substituted by leucine, methionine, valine, isoleucine, or glutamine, and/or the amino acid residue at the C-terminus is substituted by valine or leucine.

10. The tumor antigen peptide derivative of claim 8, that is selected from sequences comprising all or part of the amino acid sequence shown in SEQ ID NO: 37 or 38.

11. The tumor antigen peptide derivative of claim 10, that is selected from sequences comprising all or part of the amino acid sequence shown in SEQ ID NO: 39 or 40.

12. A pharmaceutical composition for treating or preventing

tumors, that comprises as an active ingredient at least one of substances selected from tumor antigen peptides and derivatives thereof according to ~~any one of claims 1 to 11~~ Claim 1 or 2.

13. A pharmaceutical composition for treating or preventing tumors, that comprises as an active ingredient a cyclophilin, a partial polypeptide of the cyclophilin that comprises a tumor antigen peptide portion capable of binding to an HLA antigen and being recognized by cytotoxic T lymphocytes, or a gene encoding the cyclophilin or the partial polypeptide thereof.

14. A pharmaceutical composition for treating or preventing tumors, that comprises as an active ingredient cyclophilin B, a partial polypeptide of cyclophilin B that comprises a tumor antigen peptide portion capable of binding to an HLA antigen and being recognized by cytotoxic T lymphocytes, or a gene encoding the cyclophilin B or the partial polypeptide thereof.

15. An antibody that specifically binds to the tumor antigen peptide or the derivative thereof according to ~~any one of claims 1-11~~ Claim 1 or 2.

16. An antigen-presenting cell wherein a complex between an HLA antigen and the tumor antigen peptide or the derivative thereof according to ~~any one of claims 1-11~~ Claim 1 or 2 is presented on the surface of a cell having antigen-presenting ability that is isolated from a tumor patient.

17. An antigen-presenting cell on which a complex between an HLA antigen and a tumor antigen peptide derived from a cyclophilin is presented, said antigen-presenting cell being prepared by allowing a cell having antigen-presenting ability isolated from a tumor patient to

be incorporated with the cyclophilin, a partial polypeptide thereof that comprises the tumor antigen peptide portion capable of binding to the HLA antigen and being recognized by cytotoxic T lymphocytes, or a gene encoding the cyclophilin or the partial polypeptide thereof.

18. An antigen-presenting cell on which a complex between an HLA antigen and a tumor antigen peptide derived from cyclophilin B is presented, said antigen-presenting cell being prepared by allowing a cell having antigen-presenting ability isolated from a tumor patient to be incorporated with cyclophilin B, a partial polypeptide of cyclophilin B that comprises the tumor antigen peptide portion capable of binding to the HLA antigen and being recognized by cytotoxic T lymphocytes, or a gene encoding the cyclophilin B or the partial polypeptide thereof;

19. A pharmaceutical composition for treating tumors, that comprises as an active ingredient the antigen-presenting cell according to ~~any one of claims 16-18~~ Claim 16.

20. A cytotoxic T lymphocyte that specifically recognizes a complex between an HLA antigen and a tumor antigen peptide or derivative thereof according to ~~any one of claims 1-11~~ Claim 1 or 2.

21. A cytotoxic T lymphocyte that specifically recognizes a complex between an HLA antigen and a tumor antigen peptide or derivative thereof, that is presented on an antigen-presenting cell according to ~~any one of claims 16-18~~ Claim 16.

22. A pharmaceutical composition for treating tumors, that comprises as an active ingredient the cytotoxic T lymphocyte of claim 20 ~~or 21~~.

23. A cytotoxic T lymphocyte of which deposit number is FERM

BP-6725.

24. A method for identifying tumor antigen proteins or tumor antigen peptides, which comprises using KG-CTL according to claim 23.

25. A diagnostic agent for tumors that comprises as an active ingredient a tumor antigen peptide or a derivative thereof according to ~~any one of claims 1-11~~ claim 1 or 2.